## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #1 - Monitoring and Mgmt, Low Intensity, no FI

### Scenario Description:

Setting is any lands with the potential to provide upland wildlife habitat and that potential is not currently being captured. The identified upland wildlife habitat limiting factors can be restored, enhanced or created, with the application of this practice alone, or in combination with other supporting and facilitating practices. Monitoring will be used to determine if the conservation system meets or exceeds the minimum quality criteria for the targeted wildlife. Management will be implemented based on the findings of the habitat assessment and monitoring. Upland wildlife habitat management and monitoring needed to treat the resource concerns requires no training, no qualitative data assessment, no water quality monitoring and is low in complexity and intensity. Examples of prescribed monitoring, include but are not limited to: photo points taken, use documentation by livestock, regeneration/breeding success, completing an annual management records log, documenting wildlife sightings, documenting location and species of invasive plants and condition of vegetative and structural treatments. No decision or treatment associated with this practice or facilitating practices will require income foregone. The planner will specify locations and identify the methods to the customer who will implement the monitoring and management plan. Facilitating practices may include but not limited to: 314, 315, 327, 342, 380, 384, 390, 391, 422, 472, 490, 511, 528, 550, 612, 647, 650, 654, 660, 666.

### Before Situation:

Existing degraded plant conditions and resulting inadequate habitat for fish and wildlife have resulting in low use of the area by target and associated upland wildlife species.

### After Situation:

Based on the results of a State-approved upland wildlife habitat assessment process, the application of upland wildlife habitat management efforts and prescribed monitoring have been implemented. With the application of this practice alone, or in combination with other supporting and facilitating practices, the inadequate upland wildlife habitat conditions have addressed. Monitoring has maximized the benefits of the needed upland wildlife habitat treatment efforts.

**Scenario Feature Measure:** Acres Managed and Monitored

**Scenario Unit:** Acre

**Scenario Typical Size:** 100

**Scenario Cost:** $1,014.78 **Scenario Cost/Unit:** $10.15

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Rangeland/grassland field monitoring kit | 967 | Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only. | Each | $43.67 | 1 | $43.67 |
| Truck, Pickup | 939 | Equipment and power unit costs. Labor not included. | Hour | $39.91 | 4 | $159.64 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 16 | $402.72 |
| All terrain vehicles, ATV | 965 | Includes equipment, power unit and labor costs. | Hour | $32.97 | 4 | $131.88 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 4 | $75.68 |
| ***Materials*** | | | | | | |
| Miscellaneous, containers, traps, etc. | 298 | Pheromone Traps, Culture container with lid. Includes materials and shipping only. | Each | $3.75 | 4 | $15.00 |
| ***Mobilization*** | | | | | | |
| Mobilization, small equipment | 1138 | Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds. | Each | $186.19 | 1 | $186.19 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #2 - Monitoring and Mgmt, Medium Intensity with FI

### Scenario Description:

Setting is any lands with the potential to provide upland wildlife habitat and that potential is not currently being captured. The identified upland wildlife habitat limiting factors can be restored, enhanced or created, with the application of this practice alone, or in combination with other supporting and facilitating practices. Monitoring will be used to determine if the conservation system meets or exceeds the minimum quality criteria for the targeted wildlife. Management will be implemented based on the findings of the habitat assessment and monitoring. Upland wildlife habitat management and monitoring needed to treat the resource concerns may require training, no qualitative data assessment, no water quality monitoring and is medium in complexity and intensity. Examples of prescribed monitoring, include but are not limited to: photo points taken, use documentation by livestock, regeneration/breeding success, completing an annual management records log, documenting wildlife sightings, documenting location and species of invasive plants and condition of vegetative and structural treatments. Decisions or treatments associated with this practice or facilitating practices will require income foregone. The planner will specify locations and identify the methods to the customer who will implement the monitoring and management plan. Facilitating practices may include but not limited to: 314, 315, 327, 342, 380, 384, 390, 391, 422, 472, 490, 511, 528, 550, 612, 647, 650, 654, 660, 666.

### Before Situation:

Existing degraded plant conditions and resulting inadequate habitat for fish and wildlife have resulting in low use of the area by target and associated upland wildlife species.

### After Situation:

Based on the results of a State-approved upland wildlife habitat assessment process, the application of upland wildlife habitat management efforts and prescribed monitoring have been implemented. With the application of this practice alone, or in combination with other supporting and facilitating practices, the inadequate upland wildlife habitat conditions have addressed. Monitoring has maximized the benefits of the needed upland wildlife habitat treatment efforts.

**Scenario Feature Measure:** Acres Managed and Monitored.

**Scenario Unit:** Acre

**Scenario Typical Size:** 100

**Scenario Cost:** $2,713.32 **Scenario Cost/Unit:** $27.13

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| | 295 | | | | 1 | |
| ***Acquisition of Technical Knowledge*** | | | | | | |
| Training, Registration Costs | 296 | Conference Registration Fees | Each | $133.62 | 1 | $133.62 |
| Training, Workshops | 294 | Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants. | Each | $41.42 | 1 | $41.42 |
| ***Equipment/Installation*** | | | | | | |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 16 | $402.72 |
| All terrain vehicles, ATV | 965 | Includes equipment, power unit and labor costs. | Hour | $32.97 | 6 | $197.82 |
| Truck, Pickup | 939 | Equipment and power unit costs. Labor not included. | Hour | $39.91 | 6 | $239.46 |
| Rangeland/grassland field monitoring kit | 967 | Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only. | Each | $43.67 | 1 | $43.67 |
| ***Foregone Income*** | | | | | | |
| FI, Grazing AUMs | 2079 | Grazing is the Primary Land Use | AUM | $11.38 | 100 | $1,138.00 |
| ***Labor*** | | | | | | |
| Supervisor or Manager | 234 | Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc. | Hour | $32.40 | 6 | $194.40 |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 6 | $113.52 |

***Materials***

| | | | | | | |
|---|---|---|---|---|---|---|
| Miscellaneous, containers, traps, etc. | 298 | Pheromone Traps, Culture container with lid. Includes materials and shipping only. | Each | $3.75 | 6 | $22.50 |

***Mobilization***

| | | | | | | |
|---|---|---|---|---|---|---|
| Mobilization, small equipment | 1138 | Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds. | Each | $186.19 | 1 | $186.19 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #3 - Monitoring and Mgmt, High Intensity with FI

### Scenario Description:

Setting is any lands with the potential to provide upland wildlife habitat and that potential is not currently being captured. The identified upland wildlife habitat limiting factors can be restored, enhanced or created, with the application of this practice alone, or in combination with other supporting and facilitating practices. Monitoring will be used to determine if the conservation system meets or exceeds the minimum quality criteria for the targeted wildlife. Management will be implemented based on the findings of the habitat assessment and monitoring. Upland wildlife habitat management and monitoring needed to treat the resource concerns may require training, qualitative data assessment, water quality monitoring and is high in complexity and intensity. Examples of prescribed monitoring, include but are not limited to: qualitative data assessment or water quality monitoring, photo points taken, use documentation by livestock, regeneration/breeding success, completing an annual management records log, documenting wildlife sightings, documenting location and species of invasive plants and condition of vegetative and structural treatments. Decisions or treatments associated with this practice or facilitating practices will require income foregone. The planner will specify locations and identify the methods to the customer who will implement the monitoring and management plan. Facilitating practices may include but not limited to: 314, 315, 327, 342, 380, 384, 390, 391, 422, 472, 490, 511, 528, 550, 612, 647, 650, 654, 660, 666.

### Before Situation:

Existing degraded plant conditions and resulting inadequate habitat for fish and wildlife have resulting in low use of the area by target and associated upland wildlife species.

### After Situation:

Based on the results of a State-approved upland wildlife habitat assessment process, the application of upland wildlife habitat management efforts and prescribed monitoring have been implemented. With the application of this practice alone, or in combination with other supporting and facilitating practices, the inadequate upland wildlife habitat conditions have addressed. Monitoring has maximized the benefits of the needed upland wildlife habitat treatment efforts.

**Scenario Feature Measure:** Acres Managed and Monitored.

**Scenario Unit:** Acre

**Scenario Typical Size:** 100

**Scenario Cost:** $4,016.38 **Scenario Cost/Unit:** $40.16

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| | 295 | | | | 2 | |
| ***Acquisition of Technical Knowledge*** | | | | | | |
| Training, Workshops | 294 | Educational seminar or series of meetings emphasizing interaction and exchange of information among a usually small number of participants. | Each | $41.42 | 2 | $82.84 |
| Training, Registration Costs | 296 | Conference Registration Fees | Each | $133.62 | 2 | $267.24 |
| ***Equipment/Installation*** | | | | | | |
| Rangeland/grassland field monitoring kit | 967 | Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only. | Each | $43.67 | 2 | $87.34 |
| All terrain vehicles, ATV | 965 | Includes equipment, power unit and labor costs. | Hour | $32.97 | 8 | $263.76 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 16 | $402.72 |
| Truck, Pickup | 939 | Equipment and power unit costs. Labor not included. | Hour | $39.91 | 8 | $319.28 |
| ***Foregone Income*** | | | | | | |
| FI, Grazing AUMs | 2079 | Grazing is the Primary Land Use | AUM | $11.38 | 100 | $1,138.00 |
| ***Labor*** | | | | | | |
| Supervisor or Manager | 234 | Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc. | Hour | $32.40 | 8 | $259.20 |

***Labor***

| | | | | | | |
|---|---|---|---|---|---|---|
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 8 | $151.36 |
| Skilled Labor | 230 | Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc. | Hour | $27.06 | 8 | $216.48 |
| Specialist Labor | 235 | Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services. | Hour | $99.77 | 8 | $798.16 |

***Materials***

| | | | | | | |
|---|---|---|---|---|---|---|
| Miscellaneous, containers, traps, etc. | 298 | Pheromone Traps, Culture container with lid. Includes materials and shipping only. | Each | $3.75 | 8 | $30.00 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #4 - Escape Ramp

### Scenario Description:

Retrofit an existing watering trough/tank with an appropriately designed and installed wildlife escape ramp to reduce wildlife mortality and improve wildlife habitat. Ramps is built according to 614 practice standard and guidance in "Water for Wildlife" publication: http://www.batcon.org/pdfs/water/bciwaterforwildlife.pdf. 1 person to construct and install ramp.

### Before Situation:

These structures are targeted for containers (tank, trough, or other watertight container) or small basins provisioning livestock water that currently restrict birds, small mammals, amphibians and other wildlife species from the ability to escape these confined structures once entered.

### After Situation:

Watering facilities and basins equipped with escape ramps facilitate movement of the trapped wildlife species across these ramps and safely exist from the watering facility or basin. These structures are constructed along side of the watering facility extending from the to the bottom of the container to the top inside edge. Appropriate placement at an angle and flush to the container wall enhances the successful use of escaping animal.

**Scenario Feature Measure:** Each Ramp

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $42.80 **Scenario Cost/Unit:** $42.80

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 1 | $18.92 |
| ***Materials*** | | | | | | |
| Wildlife Escape Ramp | 242 | Pool size 15' x 30', for small mammals less than one pound | Each | $23.88 | 1 | $23.88 |

**Practice: 645 - Upland Wildlife Habitat Management**

**Scenario: #5 - Fence Markers, Vinyl Undersill**

**Scenario Description:**

Existing fence retrofitted with vinyl markers that increase wire visibility and reduce mortality due to collision for wildlife species of concern sage-grouse. Markers are installed every 2 feet along top wire. Scenario is along fences in high risk areas (red areas in SGI Fence Collision Risk Model) or where a known problem exists. 1 person operation.

**Before Situation:**

Wire fences located in high risk areas of sage-grouse breeding or winter concentration grounds pose a collision threat to sage-grouse. Collisions contribute to mortality for a declining species.

**After Situation:**

Fences pose little-to-no risk for sage-grouse. This infrastructure threat is considered ameliorated. [This wholly benefical practice can minimize risk of wildife injury or death associated with fences, according to USFWS SGI Conference Report.]

**Scenario Feature Measure:** Feet of fence marked

**Scenario Unit:** Foot

**Scenario Typical Size:** 2,600

**Scenario Cost:** $283.46 **Scenario Cost/Unit:** $0.11

**Cost Details (by category):**

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| All terrain vehicles, ATV | 965 | Includes equipment, power unit and labor costs. | Hour | $32.97 | 2 | $65.94 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 6 | $113.52 |
| ***Materials*** | | | | | | |
| Vinyl Undersill Strips | 241 | Marking material using the "undersill" strips of vinyl siding made by Georgia Pacific. Priced per foot of fence per each wire. Materials only. | Foot | $0.04 | 2600 | $104.00 |

**Practice: 645 - Upland Wildlife Habitat Management**

**Scenario: #6 - Nesting and Rearing Box**

**Scenario Description:**

A structure is provided to support the nesting and rearing of the targeted species. The structure is designed to meet targeted species biology and life history needs. One constructed or pre-built structure for 5 acres of habitat.

**Before Situation:**

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Increased predation of target and non-targeted species may or may not be a problem. A suitable location to mount the box is available.

**After Situation:**

The installation of nesting and rearing boxes support the life-cycle needs of targeted speces, such as birds, bats and pollinators. Because of suitable location and conditions the nesting box can be directly mounted such as on a tree or building, thereby eliminating the need for mounting poles and predator guards. Species such as cavity dwelling birds and pollinators use this approach, but this treatment is not limited to those species. These structures/features enhance habitat, cover, and improve species survivability.

**Scenario Feature Measure:** Number installed

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $71.00 **Scenario Cost/Unit:** $71.00

**Cost Details (by category):**

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 1 | $18.92 |
| ***Materials*** | | | | | | |
| Habitat Box, Bat | 246 | BAT-1 Bat House Single. Includes materials and shipping. | Each | $52.08 | 1 | $52.08 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #7 - Nesting Box with Pole and Predator Guard

### Scenario Description:

Constructing a nest box on a pole with a predator guard. A structure is provided to support the nesting and rearing of targeted species. These structures are designed to meet targeted species biology and life history needs. Addresses Resource Concern: Inadequate Cover/Shelter.

### Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Increased predation of target and non-targeted species may also be a problem.

### After Situation:

The installation of pole mounted nesting and rearing boxes support the life-cycle needs of targeted speces, such as blue birds, bats and waterfowl. Predator guards provide needed protection of target species during nesting and rearing. These structures/features enhance habitat, cover, and reduce predation. .

**Scenario Feature Measure:** Number

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $339.43 **Scenario Cost/Unit:** $339.43

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Concrete, CIP, formless, non reinforced | 36 | Non reinforced concrete cast-in-placed without forms by chute placement. Typical strength is 3000 to 4000 psi. Includes materials, labor and equipment to transport, place and finish. | Cubic yard | $123.50 | 0.1 | $12.35 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 1.5 | $28.38 |
| ***Materials*** | | | | | | |
| Pipe, steel, galvanized, threaded, 1¼ ", schedule 40 | 256 | Spec. A-53, includes coupling and clevis hanger assembly sized for covering, 10' OC | Foot | $20.03 | 10 | $200.30 |
| Habitat Box, waterfowl | 1449 | Wood Duck Box, typically 24" x 11" x 12" with 4" wide oval entrance, single. Includes material and shipping only. | Each | $69.82 | 1 | $69.82 |
| Predator Guard | 1461 | Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only. | Each | $28.58 | 1 | $28.58 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #8 - Raptor Perch Pole

### Scenario Description:

A structure is provided to improve wildlife habitat by providing a raptor perch. These structures are designed to meet targeted species biology and life history needs. Poles are typically 12 to 15 feet above the ground surface, and buried 3 ft or more. Resource Concern: Inadequate Space, Habitat Framentation

### Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Insufficient perch locations are available.

### After Situation:

The installation of a raptor perch pole enhances the overall habitat needs of targeted species. These structures/features enhance habitat and improve species survivability.

**Scenario Feature Measure:** Number installed

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $393.47 **Scenario Cost/Unit:** $393.47

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Concrete, CIP, formless, non reinforced | 36 | Non reinforced concrete cast-in-placed without forms by chute placement. Typical strength is 3000 to 4000 psi. Includes materials, labor and equipment to transport, place and finish. | Cubic yard | $123.50 | 0.1 | $12.35 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 1 | $18.92 |
| ***Materials*** | | | | | | |
| Pipe, steel, galvanized, threaded, 1¼ ", schedule 40 | 256 | Spec. A-53, includes coupling and clevis hanger assembly sized for covering, 10' OC | Foot | $20.03 | 18 | $360.54 |
| Dimension Lumber, Treated | 1044 | Treated dimension lumber with nominal thickness equal or less than 2". Includes lumber and fasteners | Board Foot | $0.83 | 2 | $1.66 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #9 - Brush and Rock Piles

### Scenario Description:

A brush pile or rock pile provides improved wildlife habitat by providing resting and escape cover. These structures are located and constructed to meet targeted species biology and life history needs. Brush piles are 10 ft in diameter and 6 ft high at the center. Multiples brush piles are better than one larger pile; four piles per acre of area adjacent to woodlands. Piles are 250 ft apart. Stumps, logs, rocks and pipes are placed at the bottom with limbs and leaves placed on top, thereby allowing easy access to the bottom of the pile. These piles provide nesting habitat, resting areas, concealment, and protection from some predators for birds, rabbits, and other small mammals. Rock piles provide shelter and basking areas for amphibians and reptiles such as frogs, lizards, salamanders and snakes. Large rocks are placed at the bottom. Often depressions are dug in the ground surface and covered with flat rocks to create temporary pools for breeding frogs and salamanders. Rocks absorb heat in the day and radiate heat at night. Materials for brush and rock piles are collected locally.

### Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Insufficient ground cover is available for resting, basking, and escape cover. Existing brushy cover is is lacking or not well distributed.

### After Situation:

The installation of a brush piles and rock piles enhances the overall habitat needs of numerous terrestrial species. These structures/features enhance habitat and improve species survivability. By providing resting, basking, and escape cover, larger open spaces are more effectively used by ground nesting birds, amphibians, reptiles,and small mammals. Increased cover reduces predation.

**Scenario Feature Measure:** Number of Piles

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $272.79 **Scenario Cost/Unit:** $272.79

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Skidsteer, 80 HP | 933 | Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included. | Hour | $46.33 | 3 | $138.99 |
| Chainsaw | 937 | Equipment and power unit costs. Labor not included. | Hour | $6.76 | 3 | $20.28 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 6 | $113.52 |

**Practice: 645 - Upland Wildlife Habitat Management**

**Scenario: #10 - Snag Creation**

**Scenario Description:**

Create snags from existing live trees to provide nesting, foraging, perching, thermal cover, and display habitat for target species such as cavity nesting birds (woodpeckers, songbirds, wood duck, etc), small mammals (shrew, chipmunk, flying squirrel, bats, etc.), amphibians and reptiles and bumble bees. Trees must be at least 12" DBH. Resulting snag will be a minimum of 25' tall. Snag creation method is girdling 3' deep with a chainsaw. This requires one worker.

**Before Situation:**

These structures are targeted for areas that lack sufficient snag habitat conditions to support viable populations of targeted species. Insufficient cavity nests, foraging, and perching habitat exists on the planning unit. Existing snag habitat is lacking or not well distributed.

**After Situation:**

Snag creation enhances the overall habitat condition for numerous terrestrial species. These structures/features enhance habitat and improve species survivability. By providing cavity nesting sites, invertebrate foraging area, perching/hunting opportunities, and thermal cover/escape cover, larger open spaces are more effectively used by cavity nesting birds and pollinators, amphibians, reptiles,and small mammals. Increased cover reduces predation.

**Scenario Feature Measure:** Number of snags

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $22.30 **Scenario Cost/Unit:** $22.30

**Cost Details (by category):**

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Chainsaw | 937 | Equipment and power unit costs. Labor not included. | Hour | $6.76 | 0.5 | $3.38 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 1 | $18.92 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #11 - Basking Structure

### Scenario Description:

Constructing, installing, maintaining, and monitoring basking structure to provide basking/loafing cover. It is applied in wetlands and ponds where a habitat evaluation has revealed that basking/loafing cover is a limiting factor for turtles, amphibians, or other wetland wildlife and where natural recovery of that habitat element is either unlikely or will take many years. Basking structure consists of a large dead tree placed in a wetland/pond in direct sunlight. The basking log will have equal surface area exposed to the sun and submerged under water as a place for turtles and amphibians to hide if startled.

### Before Situation:

Existing habitat in wetlands and ponds possess inadequated basking/loafing cover for turtles, amphibians, or other wetland wildlife. Natural recovery of that habitat element is either unlikely or will take many years.

### After Situation:

Basking Structure is installed by placing a large log a minimum of 12" diameter into a wetland or pond in an open canopy area. The bottom half of the log is submerged and the top half is in direct sunlight. enough structures are installed so that basking habitat has been increased and/or restored to the area.

**Scenario Feature Measure:** Each

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $520.92 **Scenario Cost/Unit:** $520.92

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Chainsaw | 937 | Equipment and power unit costs. Labor not included. | Hour | $6.76 | 2 | $13.52 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 2 | $50.34 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 2 | $37.84 |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 2 | $38.38 |
| ***Materials*** | | | | | | |
| Rock Riprap, Placed with geotextile | 44 | Rock Riprap, placed with geotextile, includes materials, equipment and labor to transport and place | Cubic yard | $52.01 | 2 | $104.02 |
| ***Mobilization*** | | | | | | |
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 1 | $276.82 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #12 - Burrowing Owl Burrow

### Scenario Description:

A structure is provided to improve wildlife habitat by providing 1 burrowing owl burrow. These structures are designed to meet targeted species biology and life history needs. One burrow equals 1 bucket and pipe assembly installed 4 feet below bround with the entrance at gorund level protected by rock and PVC pipe. Resource Concerns: Inadequate Cover/Shelter, Threatened and Endangered Fish and Wildlife Species: Species of Concern.

### Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Insufficient natural burrow locations are available.

### After Situation:

The installation of a burrowing owl burrow enhances the overall habitat needs of targeted species. These structures/features enhance habitat and improve species survivability.

**Scenario Feature Measure:** Number of burrows constructed

**Scenario Unit:** Each

**Scenario Typical Size:** 1

**Scenario Cost:** $305.24 **Scenario Cost/Unit:** $305.24

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Backhoe, 80 HP | 926 | Wheel mounted backhoe excavator with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included. | Hour | $60.13 | 1 | $60.13 |
| ***Labor*** | | | | | | |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 1 | $19.19 |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 2 | $37.84 |
| ***Materials*** | | | | | | |
| Bucket, 5 gal | 1758 | 5 gallon plastic bucket. Materials only. | Each | $2.67 | 1 | $2.67 |
| Pipe, PVC, 6", SCH 40 | 980 | Materials: - 6" - PVC - SCH 40 - ASTM D1785 | Foot | $6.59 | 6 | $39.54 |
| Rock Riprap, graded, angular, material and shipping | 1200 | Graded Rock Riprap for all gradation ranges. Includes materials and delivery only. | Ton | $20.59 | 0.1 | $2.06 |
| Pipe, HDPE, 4", PCPT, Single Wall | 1270 | Pipe, Corrugated Plastic Tubing, Single Wall, Perforated, 4" diameter - ASTM F405. Material cost only. | Foot | $0.45 | 12 | $5.40 |
| ***Mobilization*** | | | | | | |
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 0.5 | $138.41 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #13 - Establish Annual Vegetation - Broadcast - with Fertilizer - with FI

### Scenario Description:

This scenario covers all upland habitats, that are not covered under 643 for the establishment of annual (non-persistent) vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Vegetation will be established utilizing convenational methods including disking, herbicide applicaiton and broadcast seeding. Fertilization will be required and will be completed in response to a soil test.

### Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resultging in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified.

### After Situation:

Planning unit is adequatly covered with annual (non-persistent) vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested.

**Scenario Feature Measure:** Area planted

**Scenario Unit:** Acre

**Scenario Typical Size:** 25

**Scenario Cost:** $6,872.81 **Scenario Cost/Unit:** $274.91

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Fertilizer, ground application, dry bulk | 950 | Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.90 | 25 | $172.50 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 8 | $201.36 |
| Seeding Operation, Broadcast, Ground | 959 | Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs. | Acre | $12.79 | 25 | $319.75 |
| Tillage, Primary | 946 | Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs. | Acre | $16.87 | 25 | $421.75 |
| Chemical, ground application | 948 | Chemical application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.23 | 25 | $155.75 |
| ***Foregone Income*** | | | | | | |
| FI, Wheat Dryland | 1963 | Dryland Wheat is Primary Crop | Acre | $119.47 | 25 | $2,986.75 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 8 | $151.36 |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 8 | $153.52 |
| ***Materials*** | | | | | | |

***Materials***

| | | | | | | |
|---|---|---|---|---|---|---|
| Phosphorus, P2O5 | 73 | Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.33 | 1250 | $412.50 |
| Potassium, K2O | 74 | K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.30 | 1000 | $300.00 |
| Nitrogen (N), Ammonium Nitrate | 69 | Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.74 | 1250 | $925.00 |
| Herbicide, Glyphosate | 334 | A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only. | Acre | $15.83 | 25 | $395.75 |

***Mobilization***

| | | | | | | |
|---|---|---|---|---|---|---|
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 1 | $276.82 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #14 - Establish Annual Vegetation - Broadcast - No Fertilizer - with FI

### Scenario Description:

This scenario covers all upland habitats, that are not covered under 643 for the establishment of annual (non-persistent) vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Vegetation will be established utilizing convenational methods including disking, herbicide applicaiton and broadcast seeding. Fertilization will NOT be required.

### Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resultging in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified.

### After Situation:

Planning unit is adequatly covered with annual (non-persistent) vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested. Fetilization will NOT be required.

**Scenario Feature Measure:** Area planted

**Scenario Unit:** Acre

**Scenario Typical Size:** 25

**Scenario Cost:** $5,062.81 **Scenario Cost/Unit:** $202.51

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Tillage, Primary | 946 | Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs. | Acre | $16.87 | 25 | $421.75 |
| Chemical, ground application | 948 | Chemical application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.23 | 25 | $155.75 |
| Seeding Operation, Broadcast, Ground | 959 | Broadcast seed via ground operation. May require post tillage operation to incorporate seed. Includes equipment, power unit and labor costs. | Acre | $12.79 | 25 | $319.75 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 8 | $201.36 |
| ***Foregone Income*** | | | | | | |
| FI, Wheat Dryland | 1963 | Dryland Wheat is Primary Crop | Acre | $119.47 | 25 | $2,986.75 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 8 | $151.36 |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 8 | $153.52 |
| ***Materials*** | | | | | | |
| Herbicide, Glyphosate | 334 | A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only. | Acre | $15.83 | 25 | $395.75 |
| ***Mobilization*** | | | | | | |

***Mobilization***

| | | | | | | |
|---|---|---|---|---|---|---|
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 1 | $276.82 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #15 - Establish Annual Vegetation - Drill - with Fertilizer - with FI

### Scenario Description:

This scenario covers all upland habitats, that are not covered under 643 for the establishment of annual (non-persistent) vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Establishment of vegetation will require methods including light disking, herbicide applicaiton and use of seed drill for planting. Fertilization will be required and will be completed in response to a soil test.

### Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resultging in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified.

### After Situation:

Planning unit is adequatly covered with annual (non-persistent) vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested.

**Scenario Feature Measure:** Area planted

**Scenario Unit:** Acre

**Scenario Typical Size:** 25

**Scenario Cost:** $6,673.81 **Scenario Cost/Unit:** $266.95

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Chemical, ground application | 948 | Chemical application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.23 | 25 | $155.75 |
| Fertilizer, ground application, dry bulk | 950 | Dry bulk fertilizer application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.90 | 25 | $172.50 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 8 | $201.36 |
| Seeding Operation, No Till/Grass Drill | 960 | No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs. | Acre | $21.70 | 25 | $542.50 |
| ***Foregone Income*** | | | | | | |
| FI, Wheat Dryland | 1963 | Dryland Wheat is Primary Crop | Acre | $119.47 | 25 | $2,986.75 |
| ***Labor*** | | | | | | |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 8 | $153.52 |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 8 | $151.36 |
| ***Materials*** | | | | | | |
| Nitrogen (N), Ammonium Nitrate | 69 | Price per pound of N supplied by Ammonium Nitrate. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.74 | 1250 | $925.00 |

***Materials***

| | | | | | | |
|---|---|---|---|---|---|---|
| Phosphorus, P2O5 | 73 | Price per pound of P2O5 supplied by Superphosphate. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.33 | 1250 | $412.50 |
| Potassium, K2O | 74 | K2O supplied by Muriate Of Potash. Price is not per pound of total product applied, no conversion is needed. | Pound | $0.30 | 1000 | $300.00 |
| Herbicide, Glyphosate | 334 | A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only. | Acre | $15.83 | 25 | $395.75 |

***Mobilization***

| | | | | | | |
|---|---|---|---|---|---|---|
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 1 | $276.82 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #16 - Establish Annual Vegetation - Drill - No Fertilizer - with FI

### Scenario Description:

This scenario covers all upland habitats, that are not covered under 643 for the establishment of annual (non-persistent) vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Establishment of vegetation will require methods including light disking, herbicide applicaiton and use of seed drill for planting. Fertilization will NOT be required.

### Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resultging in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified.

### After Situation:

Planning unit is adequatly covered with annual (non-persistent) vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested. Fetilization will NOT be required.

**Scenario Feature Measure:** Area planted

**Scenario Unit:** Acre

**Scenario Typical Size:** 25

**Scenario Cost:** $4,863.81 **Scenario Cost/Unit:** $194.55

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Chemical, ground application | 948 | Chemical application performed by ground equipment. Includes equipment, power unit and labor costs. | Acre | $6.23 | 25 | $155.75 |
| Seeding Operation, No Till/Grass Drill | 960 | No Till drill or grass drill for seeding. Includes equipment, power unit and labor costs. | Acre | $21.70 | 25 | $542.50 |
| Tractor, agricultural, 60 HP | 963 | Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included. | Hour | $25.17 | 8 | $201.36 |
| ***Foregone Income*** | | | | | | |
| FI, Wheat Dryland | 1963 | Dryland Wheat is Primary Crop | Acre | $119.47 | 25 | $2,986.75 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 8 | $151.36 |
| Equipment Operators, Light | 232 | Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers | Hour | $19.19 | 8 | $153.52 |
| ***Materials*** | | | | | | |
| Herbicide, Glyphosate | 334 | A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only. | Acre | $15.83 | 25 | $395.75 |
| ***Mobilization*** | | | | | | |
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | $276.82 | 1 | $276.82 |

## Practice: 645 - Upland Wildlife Habitat Management

## Scenario: #17 - Monitoring, Management, Foregone Income

### Scenario Description:

Setting is any land use with the potential to provide habitat for species of plants and animals identified as Rare and Declining and the habitat potential is not currently being captured. The identified habitat limiting factors can be restored, enhanced or created, with the application of this practice alone, or in combination with other supporting and facilitating practices. Monitoring will be used to determine if the conservation system meets or exceeds the minimum quality criteria for the targeted wildlife. Management will be implemented based on the findings of the habitat assessment and monitoring. Habitat management and monitoring needed to treat the resource concerns requires no training, no qualitative data assessment, no water quality monitoring and is low in complexity and intensity. Examples of prescribed monitoring, include but are not limited to: photo points taken, use documentation by livestock, regeneration/breeding success, completing an annual management records log, documenting wildlife sightings, documenting location and species of invasive plants and condition of vegetative and structural treatments. No decision or treatment associated with this practice or facilitating practices will require income foregone. The planner will specify locations and identify the methods to the customer who will implement the monitoring and management plan.

### Before Situation:

Existing degraded plant conditions and resulting inadequate habitat for fish and wildlife have resulted in low use of the area by target species identified as Rare and Declining and associated species.

### After Situation:

Based on the results of a State-approved upland wildlife habitat assessment process, the application of habitat management efforts and prescribed monitoring have been implemented. With the application of this practice alone, or in combination with other supporting and facilitating practices, the inadequate habitat conditions have been addressed. Monitoring has maximized the benefits of the needed habitat treatment efforts.

**Scenario Feature Measure:** Acres Managed and Monitored.

**Scenario Unit:** Acre

**Scenario Typical Size:** 100

**Scenario Cost:** $1,361.79 **Scenario Cost/Unit:** $13.62

### Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price ($/unit) | Quantity | Cost |
|---|---|---|---|---|---|---|
| ***Equipment/Installation*** | | | | | | |
| Rangeland/grassland field monitoring kit | 967 | Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only. | Each | $43.67 | 1 | $43.67 |
| All terrain vehicles, ATV | 965 | Includes equipment, power unit and labor costs. | Hour | $32.97 | 2 | $65.94 |
| Satellite imagery, aerial photography, infrared | 966 | Infrared imagery | Acre | $0.16 | 100 | $16.00 |
| ***Foregone Income*** | | | | | | |
| FI, Grazing AUMs | 2079 | Grazing is the Primary Land Use | AUM | $11.38 | 100 | $1,138.00 |
| ***Labor*** | | | | | | |
| General Labor | 231 | Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc. | Hour | $18.92 | 4 | $75.68 |
| ***Materials*** | | | | | | |
| Miscellaneous, containers, traps, etc. | 298 | Pheromone Traps, Culture container with lid. Includes materials and shipping only. | Each | $3.75 | 6 | $22.50 |